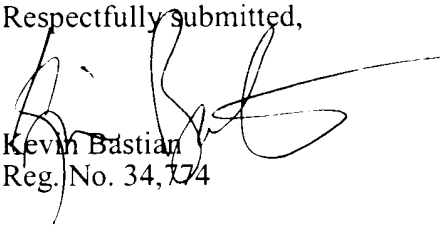
REMARKS

In response to the Office Action mailed January 24, 2003, Applicants elect with traverse to prosecute the claims of Group I directed to probes, nucleic acid constructs, transgenic cells, and methods of altering PAL levels. In addition, Applicants elect with traverse to prosecute claims directed to PAL1 nucleic acids (*e.g.*, SEQ ID NO:3) and polypeptides (*e.g.*, SEQ ID NO: 1). The claims have been amended to reflect this election. No new matter is added by this amendment.

According to the MPEP, where claims can be examined together without undue burden, the Examiner must examine the claims on the merits even though they are directed to independent and distinct inventions. See, the MPEP at 803.01. In establishing that an "undue burden" would exist for co-examination of claims, the Examiner must show that examination of the claims would involve substantially different prior art searches, making the co-examination burdensome. To show undue burden resulting from searching difficulties, the Examiner must show that the restricted groups have a separate classification, acquired a separate status in the art, or that searching would require different fields of search (MPEP at § 808.02). Applicants respectfully submit that all inventions in the present application can readily be searched without undue burden.

In light of the above, Applicants respectfully request that the restriction be withdrawn. If a telephone conference would expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (415) 576-0200.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. An isolated nucleic acid comprising a nucleotide sequence or a fragment thereof encoding the amino acid sequence set forth in SEQ ID NO:1[or SEQ ID NO:3].

2. The nucleic acid of Claim 1, wherein said nucleotide sequence comprises the nucleotide sequence set forth in SEQ ID NO:[2 or SEQ ID NO:4]3 or a fragment thereof of at least 18 base pairs up to the full length of the open reading frame encoding said amino acid sequence.

4. A nucleic acid fragment that hybridizes to SEQ ID NO:[2 or SEQ ID NO:4]3 under stringent hybridization conditions and has other than a nucleotide sequence as shown in Figure 2.

9. An isolated nucleic acid construct comprising a transcriptional initiation sequence operably linked to SEQ ID NO:[2 or SEQ ID NO:4]3.

11. The vector of Claim 10 wherein, SEQ ID NO:[2 or SEQ ID NO:4]3 is operably linked in a sense orientation with respect to said transcriptional initiation sequence.

12. The transcriptional initiation sequence of Claim 9, wherein said initiation sequence provides wound induced expression of SEQ ID NO:[2 or SEQ ID NO:4]3.

15. A method of producing a transgenic cell having altered phenylalanine ammonia-lyase levels, said method comprising:

introducing an expression cassette comprising a transcription initiation sequence operably linked to an open reading frame coding for SEQ ID NO:1 [or SEQ ID NO:3] or an enzymatically active fragment thereof, and;

growing said cell whereby said open reading frame is expressed and a cell having altered phenylalanine ammonia-lyase is produced.

PENDING CLAIMS AFTER ENTRY OF THIS AMENDMENT

1. An isolated nucleic acid comprising a nucleotide sequence or a fragment thereof encoding the amino acid sequence set forth in SEQ ID NO:1.

2. The nucleic acid of Claim 1, wherein said nucleotide sequence comprises the nucleotide sequence set forth in SEQ ID NO:3 or a fragment thereof of at least 18 base pairs up to the full length of the open reading frame encoding said amino acid sequence.

3. The nucleic acid of Claim 2, wherein said fragment is between 18 and 500 base pairs.

4. A nucleic acid fragment that hybridizes to SEQ ID NO:3 under stringent hybridization conditions and has other than a nucleotide sequence as shown in Figure 2.

5. The nucleic acid fragment of Claim 4, wherein the fragment contains a label for detection selected from the group consisting of a radioisotope, an enzyme, a particle and a protein.

9. An isolated nucleic acid construct comprising a transcriptional initiation sequence operably linked to SEQ NO:3.

10. A recombinant vector comprising the nucleic acid construct of Claim 9.

11. The vector of Claim 10 wherein, SEQ NO:3 is operably linked in a sense orientation with respect to said transcriptional initiation sequence.

12. The transcriptional initiation sequence of Claim 9, wherein said initiation sequence provides wound induced expression of SEQ NO:2 or SEQ NO:4.

13. A transgenic plant cell or bacterial cell comprising the vector of Claim 11.

15. A method of producing a transgenic cell having altered phenylalanine ammonia-lyase levels, said method comprising:

introducing an expression cassette comprising a transcription initiation sequence operably linked to an open reading frame coding for SEQ ID NO:1 or an enzymatically active fragment thereof, and;

growing said cell whereby said open reading frame is expressed and a cell having altered phenylalanine ammonia-lyase is produced.

16. The method of Claim 15, wherein open reading frame is shown in SEQ ID NO:2 or SEQ ID NO:4.

17. The method of Claim 16, wherein expression of said open reading frame results in an increase in an activity selected from the group consisting of antifungal, antibacterial and insecticidal activity.